Slope

Slope is equal to $\frac{\text{Rise}}{\text{Run}}$ OR $\frac{\text{Change in } Y}{\text{Change in } X}$

Given two ordered pairs (X_1, Y_1) & (X_2, Y_2)
the equation to find the slope of a straight line is

$$\text{Slope} = \frac{Y_1 - Y_2}{X_1 - X_2} \text{ OR } \frac{Y_2 - Y_1}{X_2 - X_1}$$

In the equation y = mx + b, the variable "m" is the slope.

$y = 8x - 7$ slope $= 8$

$y = \frac{6}{7}x + 1$ slope $= \frac{6}{7}$

$y = \frac{x}{5} - \frac{2}{3}$ slope $= \frac{1}{5}$

Slope tells you how to move on a graph once a y-intercept point is plotted.

$\frac{-4}{5}$ means to move down 4 then right 5

$\frac{6}{7}$ means to move up 6 then right 7.

Ex. Find the slope given (2, 3) and (4, -5).

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} \quad \text{OR} \quad \frac{y_1 - y_2}{x_1 - x_2}$$

$$= \frac{-5 - 3}{4 - 2} \qquad \frac{3 + 5}{2 - 4}$$

$$= \frac{-8}{2} \qquad \frac{8}{-2}$$

$$\begin{array}{ll} y & -2 \\ = -4 & -4 \end{array}$$